

REMARKS

Claims 12, 17, and 18 are now pending in this case. Applicant has amended claims 12, 17, and 18 to limit them to monochloro or dichloro derivatives of monosalts of methylene bisphosphonic acids and canceled claims 13-16 and 20-23. Support for the amendments can be found in the specification, at page 5, lines 5-10; in canceled claims 14-16; and in examples 1-6. No new matter has been added.

Reconsideration is requested in view of the remarks below.

Abstract

The Examiner requested a revision of the abstract. See the Office Action, page 2, line 15. Applicant has attached the amended abstract hereto as "Exhibit A."

Title

The Examiner stated that a new title indicative of the claimed invention is required. See the Office Action, page 2, lines 17-18. Applicant has amended the title accordingly.

Rejections under 35 U.S.C. § 102(b)

The Examiner rejected claims 12-18 and 20-23 as being anticipated on various grounds, which are traversed respectively below.

I

Claims 12, 13, 16-18, and 20-22 were rejected as being anticipated by Davisson et al. (Journal of Organic Chemistry, 1986, 51, 4768-4779). See the Office Action, page 3, lines 1-3.

Davisson et al. discloses tris(tetra-n-butylammonium) hydrogen methanediphosphonate, tetrakis(trimethylsilyl) difluoromethanediphosphonate, and tris(tetra-n-butylammonium) hydrogen methanediphosphonate. See page 4773. It does not disclose monochloro or dichloro derivatives of monosalts of methylene bisphosphonic acid with C₁₋₆ straight or branched primary, secondary or tertiary alkyl amine, an aralkyl amine, or a basic N-containing heterocycle as required by amended claim 12. Accordingly, Davisson et al. does not anticipate claim 12. Neither does it anticipate claims 17 and 18, which depend from claim 12 for at least this reason. Claims 13, 16, and 20-22 have been canceled. Therefore, Applicant requests withdrawal of this rejection.

II

Claims 12, 13, 14, 16-18, and 20-22 were rejected as being anticipated by Lampi et al. (U.S. Pat. 5,237,094). See the Office Action, page 3, lines 7-8.

Lampi et al. discloses dichloromethylenebisphosphonic acid disodium tetrahydrate. It also discloses that the tetraacid, obtained by hydrolysis of the tetraester of the methylene bisphosphonic acid, can be converted into a salt by using a suitable organic or inorganic base such as alkali or alkaline earth metal hydroxides, carbonates or hydrogen carbonates. See column 2, lines 39-44, and example 1. However, it does not disclose monochloro or dichloro derivatives of monosalts of methylene bisphosphonic acid with C₁₋₆ straight or branched primary, secondary or tertiary alkyl amine, an aralkyl amine, or a basic N-containing heterocycle as required by amended claim 12. Therefore, Lampi et al. does not anticipate claim 12. Claims 17 and 18 depend from claim 12 and are not anticipated by Lampi et al., for at least this reason. Accordingly, Applicant requests withdrawal of this rejection.

III

Claims 12, 13, 14, 16-18, and 20-22 were rejected as being anticipated by Rosini et al. (U.S. Pat. 5,237,094). See the Office Action, page 3, lines 11-12.

Rosini et al. discloses sodium, aniline, and lysine salts of difluoromethanbiphosphonic acid. See column 3, lines 25-26. It does not disclose monochloro or dichloro derivatives of monosalts of methylene bisphosphonic acid with C₁₋₆ straight or branched primary, secondary or tertiary alkyl amine, an aralkyl amine, or a basic N-containing heterocycle as required by amended claim 12. Accordingly, claim 12 and claims 17 and 18, which depend from claim 12, are not anticipated by Rosini et al. Applicant requests withdrawal of this rejection.

IV

Claims 12-18, and 20-23 were rejected as being anticipated by Hutchinson et al. (Journal of Organometallic Chemistry, 1985, 291(2), 145-151). See the Office Action, page 3, lines 15-18.

Hutchinson et al. discloses a sodium salt of chloromethylenebisphosphonate. See page 147, table 1, compound 1e. It does not disclose monochloro or dichloro derivatives of monosalts of methylene bisphosphonic acid with C₁₋₆ straight or branched primary, secondary or tertiary alkyl amine, an aralkyl amine, or a basic N-containing heterocycle as required by amended

claim 12. Therefore, claim 12 and claims 17 and 18, which depend from claim 12, are not anticipated by Hutchinson et al. Accordingly, Applicant requests withdrawal of this rejection.

V

Claims 12-18, and 20-23 were rejected as being anticipated by Staibano et al. (EP 0200980). See the Office Action, page 3, lines 21-22.

Staibano et al. discloses a disodium tetrahydrate salt of dichloromethylenediphosphonic acid. See page 4, lines 2-3. It does not disclose monochloro or dichloro derivatives of monosalts of methylene bisphosphonic acid with C₁₋₆ straight or branched primary, secondary or tertiary alkyl amine, an aralkyl amine, or a basic N-containing heterocycle as required by amended claim 12. Therefore, claim 12 and claims 17 and 18, which depend from claim 12, are not anticipated by Staibano et al. Thus, Applicant requests withdrawal of this rejection.

Rejection under 35 U.S.C. § 103(a)

Claims 12, 13, 14, 16-18, and 20-22 were rejected as obvious in view of Lampi et al. See the Office Action, page 4, lines 21-22.

As mentioned above, Lampi et al. discloses dichloromethylenebisphosphonic acid disodium tetrahydrate and the corresponding salt of a suitable organic or inorganic base such as alkali or alkaline earth metal hydroxides, carbonates or hydrogen carbonates. See column 2, lines 39-44, and example 1. However, it does not disclose or suggest monochloro or dichloro derivatives of monosalts of methylene bisphosphonic acid with C₁₋₆ straight or branched primary, secondary or tertiary alkyl amine, an aralkyl amine, or a basic N-containing heterocycle as required by amended claim 12.

Accordingly, claim 12 is not obvious in view of Lampi et al. claims 17 and 18, depend from claim 12 and also are not obvious. Therefore, Applicant requests withdrawal of this rejection.

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Attorney's Docket No.: 17325-246US2 / A2000-2P
US

Double Patenting Rejection

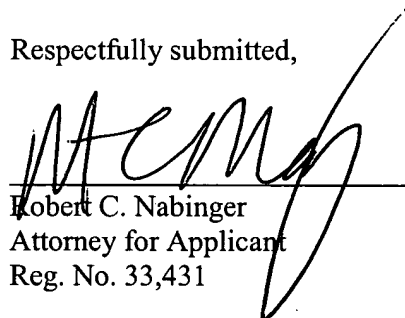
Claims 12-18 and 20-23 were rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 12 of US Patent No. 6,657,076. See the Office Action, page 7, lines 1-3

Applicant submits that, if required, a terminal disclaimer will be filed upon notification of allowable subject matter in the present application.

Applicant submits that claims 12, 17, and 18 are in condition for allowance. Enclosed is a \$120.00 check for the Petition for Extension of Time fee. Please apply any other charges or credits to deposit account 06-1050, referencing Attorney's Docket No. 17325-246US2.

Respectfully submitted,

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